

行政院所屬各機關因公出國人員出國報告書

出國報告（出國類別：國際會議）

西元 2019 年全球環境教育夥伴

諮詢顧問團隊會議

服務機關：行政院環境保護署綜計處

姓名職稱：劉宗勇處長

鄭惠文科長

林倩如薦任科員

派赴國家：馬來西亞

出國期間：108 年 7 月 23 日至 27 日

報告日期：108 年 9 月 11 日

出國報告摘要

- 一、 出國計畫名稱：西元 2019 年全球環境教育夥伴計畫諮詢顧問團隊會議
- 二、 出國人：綜合計畫處劉宗勇處長、鄭惠文科長、林倩如薦任科員、國立臺灣師範大學環境教育研究所張子超教授、鯨旗國際環境創產有限公司許毅璿執行長、環科工程顧問公司劉哲聿工程師、甘正寬專案組長
- 三、 出國日期：108 年 7 月 23 日至 27 日
- 四、 出國行程與內容概要：

日期	工作內容概要
108.7.23	啟程 下午抵達馬來西亞吉隆坡
108.7.24	上午會見駐馬來西亞臺北經濟文化辦事處 下午召開「全球環境教育夥伴計畫」領導團隊會議 晚上舉行「全球環境教育夥伴計畫諮詢顧問團隊會議」歡迎晚會
108.7.25	參加「全球環境教育夥伴計畫諮詢顧問團會議」(第一天)
108.7.26	上午參加「全球環境教育夥伴計畫諮詢顧問團會議」(第二天) 下午觀摩馬來西亞生態學校「Sri Bestari Private School」
108.7.27	場勘馬來西亞森林研究所暨馬來西亞自然協會自然教育中心 下午搭機返臺

五、行程成果評估及心得建議

(一) 行程成果評估

1. 順利於馬來西亞吉隆坡辦理「西元 2019 年全球環境教育夥伴計畫諮詢顧問團會議」—本次全球環境教育夥伴(Global Environmental Education Partnership, GEEP)諮詢顧問團會議，在美國環保署、北美環境教育學會共同協助下，順利辦理完成。本次會議由馬來西亞的世界自然基金會協助統籌，與會者包括我國以及來自美國、馬來西亞、韓國、加拿大、俄羅斯、波札納、尼泊爾、柬埔寨、印度、日本等 10 國代表，其中包含 1 位聯合國環境署代表、21 位非政府組織代表，以及 10 位政府代表，共 31 名專家學者與會。馬來西亞出席人員包括世界自然基金會 Thiagarajan Nadeson 教育及行銷部主任等 3 人，以及馬來西亞自然協會 I.S Shanmugaraj 執行長等 2 人。
2. 駐馬來西亞臺北經濟文化辦事處支持環境教育之推廣—本次於會議前會見駐馬來西亞臺北經濟文化辦事處洪慧珠代表、陳啟嘉秘書等人，交流臺灣及馬來西亞之環境政策。洪代表表示馬來西亞近年已進入環保意識抬頭的階段，且馬來西亞與臺灣關係相當密切，代表主動邀請本署未來多提供環保及環境教育相關資料，外館也協助參與推廣。辦事處陳啟嘉秘書本次也參與了會議。
3. 我國代表團與馬來西亞以及各國環境教育專家交流—我國代表團，除由本署綜計處劉宗勇處長帶領外，亦邀請深耕環境教育之國立臺灣師範大學環境教育所張子超教授，以及鯨旗國際環境創產有限公司許毅璿執行長出席。借重專家學者在臺灣環境教育領域的權威與專業，在本次與馬來西亞環境教育經驗進行交流。各國專家學者亦提議廣立成功個案結合社群媒體擴大 GEEP 號召力，以吸引環境教育領域以外的企業參與，並討論改善目前擬定的國家發展環境教育的工具包清單。另發想如何在目前現有的成果上，發展更多的夥伴關係，以有效運用各界能量，擴大環境教育永續發展效益。

4. 本次會議討論多項 GEEP 重大議題，成立多個工作小組成果豐碩—本次會議主要目的議題有 6 點：
- 國家工具包：協助全球規劃及推動環境教育政策。
 - 案例研究及電子書：提供夠多案例的深入報導供環境教育人員參考。
 - 亞太環境教育論壇：仍需更深入瞭解區域需求，並建議納入多元背景之參與者。
 - GEEP 之領導力：培力並善用青年的影響力。
 - GEEP 宣言以及下一步行動：以圖像化、簡單文字降低參與門檻，並借助著名人物的影響力號召參與。
 - 「大議題」發想：針對 GEEP 的永續經營及未來發展建議 GEEP 應有更多元領域合作。
5. 觀摩綠旗生態學校 Sri Bestari Private School—Sri Bestari Private School 於西元 2012 年成為生態學校，今年（西元 2019 年）將申請第 2 次綠旗更新，期望取得第 3 面綠旗。推動過程中獲得許多家長及周邊居民以實際行動表達支持，校方也與多個校外團體或企業建立合作關係。在校長及老師的帶領下，全校相當支持環境教育，校園中有許多讓學生接觸環境教育的巧思，校方甚至有以生態學校為主題改編歌曲。現任召集人亦著手規劃師資的培訓與交接，預計以 5 年培訓接班師資，讓生態學校理念可在校內持續執行。
6. 場勘馬來西亞森林研究所暨馬來西亞自然協會自然教育中心—馬來西亞森林研究所為西元 1929 年成立之研究機構，在熱帶林相研究上有著全球領導地位。森林研究所與馬來西亞自然協會共同經營自然教育中心，25 年來提供學生及大眾在自然環境中的多元學習機會。除了跟學校合作辦理戶外課程，自然中心也提供環境教育人員實習機會、培訓工作坊，並建立青年志工團隊，讓 15 歲以上的青少年可藉由志工活動接觸自然環境和初步瞭解環境職涯。自然教育中心為公部門與私部門合作的優秀案例。

（二）心得建議

1. 本次活動一直環繞的一項議題是如何讓 GEEP 能夠更廣大蓬勃的發展。其中有幾點關鍵主題不斷出現：

- 善用青年力量

GEEP 協助資助的 “EE 30 under 30” 已成功舉辦 3 屆，相關成果也在此次的活動中有報告。青年的活力與創意不斷激發會議上的熱烈討論，因此青年的號召力也不斷的被各個討論小組提及，不論是 GEEP 的行銷也好、亞洲論壇也好，諮詢委員對於青年都有很高的期許，希望他們能成為 GEEP 亮眼的公關大使。

- 強化社群網絡行銷能力

社群媒體是現代社會不可或缺的平台，但 GEEP 在這些地方都尚未開發。應該要思考能否在 Facebook、Instagram、LinkedIn、Youtube 等平台上發聲，以提升能見度。更重要的是透過社群媒體建立 GEEP 的鮮明形象，刷新各界對於環境教育的眼光與印象。

- 案例與故事

故事是將一件事情有效傳達最深刻的方法，能將 GEEP 的案例用故事包裝推廣，便是件相當重要的工作，因此本次的會議也挖掘出許多案例，希望能讓電子書豐富，並用故事的方式陳述，讓瀏覽者能夠對於 GEEP 的工作與貢獻能有進一步的瞭解。

- 突破同溫層

多年來，GEEP 一向都是內部掌聲不斷，但是往往沒有聽到外界的聲音，導致發展上一直限縮在環境教育圈內。未來若要能擴大發展的漣漪，GEEP 一定要想辦法打破同溫層，接受外面的資訊跟能量。各個參與者都不斷提到，GEEP 應該要將企業與業界的能量導入環境教育領域內，讓與永續 3E (Environment, Economy, Equity) 能共同促進 GEEP 發展。

2. 本次會議在邀約階段便有多位顧問反映今年國際會議過多，考量預算及時間已無法安排國際行程。雖然會面討論有較好的成效，但 1 年 2 次的國際會議對於出席者是負擔，長途旅行就碳排放而言對自然環境也是負擔，因此建議 1 年舉辦 1 次實體會議，非會議期間則可仰賴科技輔助或以區域為單位組成工作小組進行討論、規劃及推廣。
3. GEEP 經費及其運用方面，目前 GEEP 之運作主要由我國環保署出資，美國環保署協助負擔各國專家學者之旅費。為確保 GEEP 運作的永續性，建議可考慮多元經費來源，包含與企業、臺商等合作落實企業社會責任。而當 GEEP 網絡發展到一定程度，具有足夠知名度與參與度，經費運用方式可參考我國自然中心之營運模式，來自政府單位的經費改為僅支應基本運作，維持核心運作，而其他周邊費用則由營運單位或透過其他管道自籌。

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壹、前言

全球環境教育夥伴(Global Environmental Education Partnership, GEEP)係由我國與美國環保署於西元(下同)2014年發起並共同推動的區域及全球環境教育專案。目標為透過建立多元且高度包容性的學習網絡，強化各國環境教育以達成更永續的未來。GEEP目前的推廣途徑包含網頁平台、每季電子報及會議參與，可提供包含國家環境教育簡介、案例研究、環境教育人員資料庫、環境教育團體資料庫等重點學習資源。

2014年4月及10月的會議中起草未來兩年的合作方向，確立一年進行兩次會議的模式，並於同年建立專屬網頁。2015年則以將成功的環境教育經驗複製到其他區域為目標，將發展重點置於政策、專業發展、研究、評估，以及最佳案例與作法建檔等工作，以網頁做為資訊分享平台。

2016年5月的會議進一步將GEEP的組織制度化，並製作會員規章、確立任務及目標等。GEEP成員包含領導團隊、秘書處、諮詢顧問團隊，以及一般成員；秘書處由北美環境教育學會擔任。10月會議中持續更新GEEP的管理、資金、策略，及未來方向，並強化網路資訊平台，推出國家環境教育簡介和案例研究的統一格式；同年也強調環境教育的區域合作，於肯亞、英國、北美啟動環境教育平台。

2017年持續探討GEEP的角色定位，並強化網絡思維。網路平台也有30篇國家環境教育簡介、11篇案例研究，且規劃進行多國語言翻譯，並率先翻譯為中文。另以伯利西宣言40周年為題，發起10項重點領域的行動號召，募集全球環境教育人員對環境教育未來發展的看法。同年5月會議中更成立7個工作小組，並以成為「網絡間的網絡」的目標，組成「東南亞、亞太、南亞地區發展組」，開始討論亞洲及太平洋地區強化網絡的可能性。

2018年會議中肯定GEEP發展至今的組織彈性，也重新討論成員招募的可行性；並延續2017年之行動號召，發表一份環境教育宣言，訂出3大目標，於北美環境教育學會年會中廣為宣傳，大幅增加GEEP的曝光度。而針對亞洲及太平洋地區之網絡發展，GEEP以辦理亞太環境教育論壇為目標，規劃及討論2018至2019年之準備工作。

貳、出國人員及行程

本次代表團由環保署綜計處劉宗勇處長領軍，團員包含環保署綜計處鄭惠文科長、林倩如薦任科員，以及國立臺灣師範大學張子超教授、鯨旗國際環境創產有限公司許毅璿執行長、環保署委辦公司環科工程顧問股份有限公司工程師劉哲聿及專案組長甘正寬共 7 人，出國人員詳列於表 1。

出國期間為民國 108 年 7 月 23 日至 27 日，共計 5 日，出國行程包含 7 月 25 日至 26 日之全球環境教育夥伴諮詢顧問團隊會議，以及 7 月 27 日上午進行亞太環境教育論壇場地勘查，行程規劃如表 2。

表 1、出國人員及機關

中英文姓名	機關（構）名稱	職稱
劉宗勇 Liu, Tsung-Yung	行政院環保署綜合計畫處	處長
鄭惠文 Cheng, Hui-Wen	行政院環保署綜合計畫處	科長
林倩如 Lin, Chien-Ju	行政院環保署綜合計畫處	薦任科員
張子超 Chang, Tzu-Chau	國立臺灣師範大學	教授
許毅璿 Hsu, Yi-Hsuan (Tim)	鯨旗國際環境創產有限公司	執行長
甘正寬 Kan, Cheng-Kuan	環科工程顧問股份有限公司	專案組長
劉哲聿 Liu, Jer-Yuh	環科工程顧問股份有限公司	工程師

表 2、出國行程

日期	時間	行程
7/23 (二)	08:50-13:30	啟程前往吉隆坡
	14:30-15:30	前往吉隆坡香格里拉飯店
7/24 (三)	10:30-11:30	拜會駐馬來西亞臺北經濟文化辦事處
	16:00-17:00	與美方的工作會議
	18:30-19:00	迎賓雞尾酒宴
7/25 (四)	09:00-17:30	全球環境教育夥伴計畫諮詢顧問團隊會議
	18:30-21:00	晚宴
7/26 (五)	09:00-14:30	全球環境教育夥伴計畫諮詢顧問團隊會議
	14:30-17:00	參訪行程：Sri Bestari Private School (生態學校綠旗)
7/27 (六)	09:00-11:00	亞太環境教育論壇場地勘查(馬來西亞森林研究所暨馬來西亞自然協會自然教育中心)
	11:00-12:15	搭車前往吉隆坡機場
	14:40-19:30	搭機返臺

參、出國內容

一、拜會駐馬來西亞臺北經濟文化辦事處洪慧珠大使等人

本次於會議前拜會駐馬來西亞臺北經濟文化辦事處洪慧珠代表及陳啟嘉組長等人，針對臺灣及馬來西亞之環境政策進行交流。洪代表表示馬來西亞近年經濟發展良好，已經進入環保意識抬頭的階段，而環境保護亟需以環境教育奠定良好基礎，且馬來西亞境內有 700 萬華人，與臺灣關係相當密切，洪代表更主動邀請我國環保署未來多提供環保及環境教育相關資料，外館也會積極協助參與推廣。辦事處陳啟嘉組長本次更出席參與為期 1 天半的全球環境教育夥伴諮詢顧問團隊會議。(圖 1)

二、全球環境教育夥伴諮詢顧問團隊會議

2018 年 GEEP 發表首項共同行動（行動號召及宣言連署）、開始規劃案例研究電子書及亞太環境教育論壇，並對外於北美環境教育學會年會中擴大宣傳、發行電子報，與過去相比大幅提升行動規模與曝光度。

2019 年 GEEP 諮詢顧問團隊會議以 2018 年的發展作為基礎延續討論，以確認後續發展方向並規劃相關行動。會議討論項目可歸納為 3 大類別：GEEP 之發展及管理、GEEP 之宣傳與推廣、以及亞太環境教育論壇籌備。會議參與人員詳如表 3。



圖 1、拜會駐馬來西亞臺北經濟文化辦事處洪慧珠大使等人

表 3、全球環境教育夥伴會議與會名單

姓名	國家 (國籍/任職地)	職稱/單位
劉宗勇	臺灣	處長/環保署綜計處 Director General / Environmental Protection Administration- Taiwan
鄭惠文	臺灣	科長/環保署綜計處 Section Chief / Environmental Protection Administration- Taiwan
林倩如	臺灣	薦任科員/環保署綜計處 Senior Officer / Environmental Protection Administration- Taiwan
陳啟嘉	臺灣	組長/駐馬來西亞台北經濟文化辦事處 Director of General Affairs Division / Taipei Economic and Cultural Office in Malaysia
高志璋	臺灣	科長/教育部資科司 Section Chief / Ministry of Education, Department of Information and Technology Education
許毅璿	臺灣	執行長、理事/鯨旗國際環境創產有限公司、 中華民國環境教育學會（國際交流委員會） Executive Director / Global Environmental Enhancement Inc. (GEE)
張子超	臺灣	教授/國立師範大學 Professor / National Taiwan Normal University
甘正寬	臺灣	專案組長/環科工程顧問股份有限公司 Project Supervisor / Environmental Science Technology Consultants Corporation
劉哲聿	臺灣	工程師/環科工程顧問股份有限公司 Engineer / Environmental Science Technology Consultants Corporation

姓名	國家 (國籍/任職地)	職稱/單位
Ginger Potter	美國	資深教育專家/美國環保署 Senior Education Specialist / U.S. Environmental Protection Agency
Mahesh Pradhan	尼泊爾/ 日本	策略聯盟及知識管理專員/聯合國環境屬國 國際環境技術中心 Coordinator, Strategic Partnerships and Knowledge Management / United Nations Environment Program; International Environmental Technology Centre
Roath Sith	柬埔寨	副處長/環境部環境知識與資訊總處 Deputy Director General, General Directorate of Environmental Knowledge and Information / Ministry of Environment
Kumi Tashiro	日本	副室長/環境省綜合環境政策局環境教育推 進室 Deputy Director / Ministry of Environment
Judy Braus	美國	執行總監/北美環境教育學會 Executive Director/ NAAEE
Drew Burnett	美國	資深顧問/北美環境教育學會 Consultant / NAAEE
Nina Hamilton	美國	國際計畫專員/北美環境教育學會 International Programs Specialist / NAAEE
Steve Joyce	美國	顧問/ Training Resources Group Consultant / Training Resources Group
Melissa Taggart	美國	國際計畫主任/北美環境教育學會 Director, International Programs / NAAEE
Mphemelang Ketlhoilwe	波札那	副教授/波札那大學 Associate Professor / University of Botswana
Chankook Kim	韓國	副教授/韓國師範大學環境教育系 Associate Professor, Department of EE / Korea National University of Education

姓名	國家 (國籍/任職地)	職稱/單位
Alex Kudryavtsev	俄羅斯/ 美國	研究員/康乃爾大學 Researcher / Cornell University
Augusto Medina	美國/ 加拿大	獨立顧問 Consultant
Gayatri Raghwa	印度	獨立顧問 Education Consultant
Kartikeya V. Sarabhai	印度	總監/印度環境教育中心 Director/Centre for Environmental Education
Jo Leen Yap	馬來西亞	研究員、自然教育人員/ 馬來西亞理科學大學 Wildlife Researcher & Nature Educator / Langur Project Penang, Universiti Sains Malaysia
Thiagarajan Nadeson	馬來西亞	教育及行銷部主任/馬來西亞世界自然基金會 Head of Education and Markets / WWF- Malaysia
Nor Shidawati Abdul Rasid	馬來西亞	資深經理/馬來西亞世界自然基金會 Senior Manager, Formal Education / WWF-Malaysia
Johleen Koh	馬來西亞	生態學校計畫經理/馬來西亞世界自然基金會 Manager FEE EcoCampus / WWF-Malaysia
I.S. Shanmugaraj	馬來西亞	執行長/馬來西亞環境協會 Executive Director / Malaysia Nature Society
Shiyamala Sivakumar	馬來西亞	會員管理經理/馬來西亞世界自然基金會 Membership Manager / Malaysian Nature Society

(一) 會議目標

1. 更新過去 1 年的成果與進度，並規劃 2019 年至 2020 年執行方向：包含 GEEP 網絡調查初步成果，以及亞太環境教育論壇之目標、議程草案等。
2. 討論「國家工具包」之內容草案、電子書規劃及尋求案例研究題材。
3. 進行以下議題之後續行動討論：
 - (1) 亞太環境教育論壇、
 - (2) 建構領導力、
 - (3) 行動號召宣言及相關宣傳行動、
 - (4) 其他會議過程中出現之議題。
4. 參訪當地環境教育場域，實地走訪亞太環境教育論壇預計之參訪行程。

(二) 會議議程

本次會議為期 2 日，包含 1 日半的室內會議，以及半日參訪行程。詳細行程請見表 4 及表 5。

(三) 會議討論內容

1. 於會議中更新電子書之規劃進度、討論國家工具包之設計、並以分組的方式討論多項重要議題；保留時間讓各國顧問及馬來西亞當地環境教育組織分享重大環境教育資訊；並將 GEEP 之重點議題以分組討論的方式進行，以最短時間收集最多意見，討論之議題有下列 6 項：
 - (1) 國家工具包及電子書
 - (2) 國家案例發展
 - (3) 亞太環境教育論壇
 - (4) GEEP 之領導力
 - (5) GEEP 宣言以及下一步行動
 - (6) 「大議題」發想

表 4、全球環境教育夥伴會議 7 月 25 日議程

時間	行程
09:00-09:45	歡迎及簡介 <ul style="list-style-type: none"> ▪ 世界自然基金會、馬來西亞自然協會 ▪ 領導團隊致詞（臺灣環保署、美國環保署） ▪ 摘要本次會議之目標及議程 ▪ 破冰活動
09:45-10:25	近況更新：網絡調查、電子書、網頁、行動號召、宣言、GEEP 獎學金、30 Under 30 等
10:25-10:40	休息
10:40-11:00	近況更新內容之問與答
11:00-12:00	國家工具包及電子書 <ul style="list-style-type: none"> ▪ 報告國家工具包及電子書架構草案 ▪ 小組討論
12:00-13:15	午餐
13:15-14:15	小組發表及討論
14:15-15:15	國家案例研究 <ul style="list-style-type: none"> ▪ 小組討論：尋找適合撰寫的案例
15:15-15:30	休息
15:30-16:30	小組發表及討論
15:30-17:15	諮詢顧問團隊近況更新
17:15-17:30	綜合討論、為第 2 天會議進行準備
17:30	第 1 天會議結束
18:30-21:00	晚餐 – GEEP 諮詢顧問成員與貴賓

表 5、全球環境教育夥伴會議 7 月 26 日議程

時間	行程
09:00-09:30	第 2 天會議開始 <ul style="list-style-type: none"> ▪ 開場活動 ▪ 第 1 天會議之重點回顧 ▪ 摘要本日議程
09:30-10:45	分組討論 <ul style="list-style-type: none"> ▪ 亞太環境教育論壇：聯繫管道、與會人員、經費 ▪ 建構領導力 ▪ 宣言及實際行動 ▪ 其他會議過程中產生的議題
10:45-11:00	休息
11:00-12:00	小組發表及討論
12:00-13:00	午餐
13:00-13:30	諮詢顧問團隊近況更新
13:30-14:00	10 月會議議程草案
14:00-14:30	未來方向及總結
14:30-17:00	參訪行程：Sri Bestari School（綠旗學校）

2. 國家工具包初步規劃以行動號召的項目作為基準，列出強化國家級環境教育政策與計畫的建議策略清單。經分組討論後，彙整各組的意見，並認為國家工具應包含：

- (1) 擴大使用對象的框架：讓讀者能發揮國家環境教育發展的鼓吹者角色，以號召國內各界參與。
- (2) 提供具體的執行方案或項目：提供可以執行的環境作為、找出關鍵利害相關人及面對不同利害相關人的溝通策略等。
- (3) 跳出環教圈：重視溝通上的用詞，強調使用的話語應該從教育面轉為各界能理解並有共鳴的角度；例如從教育轉為培力，並點出環境培力的效益。

- (4) 應包含檢視工具：提供能讓各國瞭解目前發展現況的評量表，同時瞭解國際上發展較佳的區域現況，幫助發展中國家對症下藥，提供其所需的環境教育計畫。
- (5) 應包含使用教學：除了工具包的說明文字外，也可辦理線上課程或實體工作坊引導有需要的國家使用，亞太環境教育論壇中亦可規劃國家工具包的教學及應用工作坊。
- (6) 規劃後續成效評估：收集現況資訊，用以評估使用工具包後的成效。
- (7) 在亞太環境教育論壇前完成國家工具包：讓參與國家可在論壇中依照工具包內容進行討論。

GEEP 顧問 Kartikeya 將與北美環境教育學會合作彙整此次會議的回饋意見，並據以規劃國家工具包更具體的內容。

3. 案例研究電子書的草案由 GEEP 顧問 Alex 及北美環境教育學會 Melissa 製作，以協助教育者運用實際案例為編寫目標，草案中初步將案例研究分類為「自然環境議題」、「社會議題」，以及「教學方法與策略」3 個章節。每個章節中包含背景理論說明，各章節下再細分多項子議題及各篇案例研究。經分組討論後，諮詢顧問團認為案例研究及電子書應有下列幾項重點：

- (1) 具故事性：透過講述故事的方式，讓讀者可以深刻瞭解個案內容；包括發展中可能遇到的問題、所需的資源，以及發展後可以收到的效益等。
- (2) 靈活分類：因為每個個案可能蘊含的課題多元，應改變目前以議題分類的方式，而是以個案為主，並將個案標記不同屬性或關鍵字，以矩陣圖的方式展現案例間的關聯性及內容的多樣性。
- (3) 包含更多元的議題：除了草案中所提及的子項目外，諮詢顧問團隊另提出的議題類別有：
 - 海洋環境、海洋廢棄物
 - 城鄉議題
 - 原住民議題
 - 人與環境間的衝突

- 能源
- 畜牧業及農業、糧食及營養議題
- 空氣品質
- 水資源
- 青年培力
- 合作關係的建立與發展

彙整本次會議中的意見後，GEEP 顧問 Alex 及北美環境教育學會將會提出新版本草案；並由顧問成員中的 Kartikeya、Augusto 及 Thiagarajan 協助校閱及給予意見。

4. 亞太環境教育論壇原定於 2020 年舉辦，但考量國家工具包之製作、各國現況調查，以及尋求合適邀請對象等的作業時間，經分組討論後得出結論如下：
 - (1) 舉辦時間：暫定於 2021 年 2 月到 6 月間。
 - (2) 邀請對象應包括國家官方代表與業界夥伴，以及區域網絡代表：
 - 應找到各國具有關鍵影響力的人物。
 - 政府人員的代表效力依各國政策自行決定。
 - 強調以國家為中心的區域性集結。
 - 重視各國的建議，讓各地的參與者均能發聲。
 - 要讓企業能參與而非只是贊助，結合企業社會責任推廣環境教育。
 - 能代表性區域網絡（如：東協、亞太經濟合作會議等）。
 - (3) 將人數控制在 60-100 人之間，開放多方參與，但以亞太地區優先，以兼顧多元與聚焦。
 - (4) 為獲得充分效益，各國希望會議內容能夠聚焦，並吸引關鍵利害關係人，讓每個議題得以充分發展。
 - (5) 建議規劃 2 天邀請制的閉門會議，以及 2 天的開放式活動。

5. 在建構領導力方面，諮詢顧問團建議：
 - (1) 善用青年的影響力，讓「EE 30 under 30」得獎者可以充分發揮：
 - i. 邀請獲獎者成為國際會議或工作坊的引言人，激發號召力。

- ii. 提供發揮影響力的機會與舞台
 - 請得獎者參與線上論壇、網路研討會等、
 - 請得獎者提供自身經驗，將他們的案例作為教材、
 - 邀請他們引介其工作場域作為國際交流等之參訪點。
- (2) 培養青年領導力：
- i. 結合各國或區域的青年培力相關計畫，推舉出各國 EE 30 Under 30 候選人。
 - ii. 提供領導力檢視標準，供參與者認識自己可以加強的能力或領域。
- (3) 建構 GEEP 的內部領導力
- i. 讓「EE 30 under 30」的得獎者參與會議及亞太環境教育論壇。
 - ii. 鼓勵青年帶領環境教育與其他各項活動。
 - iii. 委請獲獎者在各自的國家、區域甚至全球推廣環境教育。
6. 於西元 2018 年宣傳行動號召及宣言後，諮詢顧問團認為下一步應採取更具體的行動，相關討論內容包含：
- (1) 可以參考「Humans of New York」的照片敘事方式，發起「Humans of GEEP」以凝聚參與感，並宣傳各自為環境所做的日常努力，將宣言結合行動。
- (2) 強化約束力，例如劃定執行的時間期程。
- (3) 善用社群媒體作為宣告宣言的媒介，可參考馬來西亞自然協會的「Lend a Hand Program」：
- 以圖像化的說明做為媒介，讓瀏覽者可以一目了然
 - 善用「手印記(Handprint)」或以「標記(#)」的方式記錄效益。
- (4) 增加參與誘因
- i. 讓參與者獲得榮譽感。
 - ii. 參考我國環保署發展可以購買綠色產品的「環保綠點」作為獎勵。
 - iii. 設立不同的會員等級，鼓勵參與行動。
- (5) 結合青年與流行文化推廣宣言與行動
- i. 邀請「EE 30 under 30」的獲獎者率領推動。
 - ii. 結合地球日等環保紀念日推廣一系列活動。

- iii. 邀請青年偶像或公眾人物共襄盛舉，如：爭取女性教育權而獲諾貝爾和平獎的馬拉拉、美國流行歌手 Akon 或發起環境罷課的瑞典學生 Greta Thunberg。

(6) 環境教育募款

- i. 善用各種平台或網路社群推廣環境教育。
- ii. 募款方式可為：
 - 讓贊助企業認養宣言的行動項目。
 - 媒合企業與需要幫助的地方團體。

7. 諮詢顧問團發想的其他重大議題有：

(1) 創造環境教育社會企業

社會企業已成為全球新趨勢，同時 GEEP 的營運也需有經費挹注，應善用企業模式，培植有潛力的社會企業，同時也讓環境教育工作及環境教育工作者能夠獨立發展。

(2) 提供環境教育的投資回報價值

投資效益是社會上普遍關注的項目，因此要能凸顯環境教育的價值是件相當重要的工作。GEEP 應建構一個框架，讓社會明白環境教育的隱性價值，除了提供給大眾參考，也可作為尋求企業合作時的說帖。

(3) 打造全球環教商業鍊

企業社會責任為全球的發展趨勢，GEEP 應善用企業資源，打造環境品牌，利用商業能量協助 GEEP 蓬勃發展。

(4) 與地方的連結

GEEP 應該從全球領導智庫的角色，逐漸轉往區域發展，建立區域性的推廣辦公室，紮根地方深入發展。

8. 與會來賓近況分享：

- (1) 我國環保署介紹限塑政策及菸灰菸蒂不落地之宣導。
- (2) Alex Kudryavtsev 介紹康乃爾大學的線上環境教育課程。

- (3) Gayatri Ragwa 介紹聯合國在大專院校所推行的環境教育計畫、印度的最新倡議及青年培訓計畫，以及綠領工作的養成。
- (4) Mphemelang Ketlhoilwe 介紹波札那如何面對象群與聚落間的衝突。
- (5) Kartikeya Sarabhai 介紹印度環境教育中心執行中的各項計畫。
- (6) Mahesh Pradhan 介紹聯合國環境署的高等教育永續倡議，及永續發展目標成果平台上的合作夥伴頁面中有將 GEEP 列入夥伴清單。
- (7) Chankook Kim 介紹正在撰寫的各國環境教育政策分析研究。
- (8) 張子超老師介紹我國將環境教育融入學校課綱的方式。
- (9) 許毅璿老師及教育部高志璋科長介紹教育部推動環境教育的政策及成果。
- (10) Judy Braus 介紹北美環境教育學會推廣公民科學，以及連結學術與實作的研究文獻資料庫。
- (11) Thiagarajan Nadeson 介紹馬來西亞的永續教育發展和馬來西亞世界自然基金會的相關計畫。

9. 會議第 2 日前往觀摩綠旗生態學校 Sri Bestari Private School (圖 2)，此校於 2012 年成為生態學校，隔年取得銅牌認證，2014 年取得銀牌認證後，於 2015 年取得第一面綠旗，為馬來西亞第一個取得綠旗的私立學校。在校方持續推動下，今年 (2019 年) 將申請第 2 次綠旗更新，期望取得第 3 面綠旗。



圖 2、參訪綠旗生態學校 Sri Bestari Private School

生態行動團隊的校內成員包含召集人 Shamsul Mutaza Abu Bakar 老師、校長及其他 4 位教師，以及中學部學生小隊及國小部學生小隊等；推動過程中獲得許多家長及周邊居民以實際行動表達支持，校方也與多個校外團體或企業建立合作關係，甚至由學生帶領企業成員進行相關永續活動。

在成為生態學校前，Sri Bestari 即會每年訂下該學年度的教學主題；成為生態學校後，每年的教學主題都與環境相關，今年的主題為綠建築。此外，學生會依據當年的主題做主題式學習及研究，並設計主題介紹攤位。在校長及老師的帶領下，全校相當支持環境教育，校園中有許多讓學生接觸環境教育的巧思，校方甚至以生態學校為主題改編歌曲，這樣的教學成為學校的重點特色，甚至有中學生主動為此前來就讀。

而在生態行動團隊師資方面，現任召集人 Shamsul 老師在推動生態學校第 5 年時著手規劃師資的培訓與交接，就如同生態行動團隊的學生會交接，老師預計以 5 年培訓接班師資，讓生態學校理念可在校內持續執行。

馬來西亞透過馬來西亞世界自然基金會參與 FEE 之生態學校計畫，在執行上有 10 項環境路徑，其認證等級與臺灣相同，分為銅級、銀級與綠旗，但可重複申請銅級或銀級。

（四）本次會議關鍵重點與結論彙整

1. 關鍵策略

與會來賓對於提升環境教育的影響力、環境教育的影響範圍，以及網絡經營的重要性深有感觸，針對各項討論議題均有提及下列的想法：

- 青年參與及培力：包含善用「EE 30 Under 30」得主的影響力。
- 多元管道之宣傳：善用社群媒體，擴大觸及層面。
- 企業參與：跨出環境教育界，擴大社會、經濟影響層面。
- 永續經營：尋求穩定發展及成長的經營模式。

2. 亞太環境教育論壇

考量前置調查及準備，亞太環境教育論壇預計於 2021 年舉辦。邀請對象除政府人員外，也建議尋找關鍵的區域網絡代表及企業代

表，擴大會議效益及影響範圍。會議形式建議保留邀請制的會議，但也增加開放式的活動。

3. 國家工具包規劃及應用

國家工具包應具備現況檢視及具體執行方案，讓使用者可瞭解自身國家並發展國家級環境教育計畫所需考量的項目。另可主動辦理說明課程及實作工作坊，於亞太環境教育論壇中活用國家工具包。國家工具包預計於辦理亞太環境教育論壇前完成，並進一步規劃由北美環境教育學會及 GEEP 顧問成員 Kartikeya 共同進行。

4. 案例研究撰寫及電子書設計

案例研究及電子書應兼具實用性及故事性，在內容規劃上要能提供足夠知識，但也不能流於教條式的說教。呈現上則要以關鍵字具體表現案例研究的內容，也要能呈現不同案例研究間的連結。GEEP 顧問成員 Alex 及北美環境教育學會將會提出新版本的草案，並由顧問成員中的 Kartikeya、Augusto 及 Thiagarajan 協助校閱及給予意見。

三、場勘馬來西亞森林研究所暨馬來西亞自然協會自然教育中心

本次會議亦安排亞太環境教育論壇相關辦理場地之場勘，經由馬來西亞環境協會執行長 Shanmugaraj 推薦，前往馬來西亞森林研究所暨馬來西亞自然協會自然教育中心進行地點場勘（圖 3）。



圖 3、馬來西亞森林研究所暨馬來西亞自然協會自然教育中心

馬來西亞森林研究所(Forest Research Institute Malaysia, FRIM)為 1929 年成立之研究機構，在熱帶林相研究上有著全球領導地位。森林研究所與馬來西亞自然協會(Malaysian Nature Society, MNS)共同經營自然教育中心(FRIM-MNS Nature Education Centre)，25 年來提供學生及大眾在自然環境中的多元學習機會。除了與學校合作辦理戶外課程，自然中心也提供環境教育人員實習機會、培訓工作坊，並建立青年志工團隊，讓 15 歲以上的青少年可藉由志工活動接觸自然環境和初步瞭解環境職涯。此外，自然教育中心為公部門與私部門合作的優秀案例，並可展現馬來西亞的環境青年培力成果。

肆、行程成果評估與建議

一、行程成果評估

- (一) 順利於馬來西亞吉隆坡辦理「西元 2019 年全球環境教育夥伴計畫諮詢顧問團會議」—本次全球環境教育夥伴(Global Environmental Education Partnership, GEEP)諮詢顧問團會議，在美國環保署、北美環境教育學會共同協助下，順利辦理完成。本次會議由馬來西亞的世界自然基金會協助統籌，與會者包括我國以及來自美國、馬來西亞、韓國、加拿大、俄羅斯、波札納、尼泊爾、柬埔寨、印度、日本等 10 國代表，其中包含 1 位聯合國環境署代表、21 位非政府組織代表，以及 10 位政府代表，共 31 名專家學者與會。馬來西亞出席人員包括世界自然基金會 Thiagarajan Nadeson 教育及行銷部主任等 3 人，以及馬來西亞自然協會 I.S Shanmugaraj 執行長等 2 人。
- (二) 駐馬來西亞臺北經濟文化辦事處支持環境教育之推廣—本次於會議前會見駐馬來西亞臺北經濟文化辦事處洪慧珠代表、陳啟嘉秘書等人，交流臺灣及馬來西亞之環境政策。洪代表表示馬來西亞近年已進入環保意識抬頭的階段，且馬來西亞與臺灣關係相當密切，代表主動邀請本署未來多提供環保及環境教育相關資料，外館也協助參與推廣。辦事處陳啟嘉秘書本次也參與了會議。
- (三) 我國代表團與馬來西亞以及各國環境教育專家交流—我國代表團，除由本署綜計處劉宗勇處長帶領外，亦邀請深耕環境教育之國立臺灣師範大學環境教育所張子超教授，以及鯨旗國際環境創產有限公司許毅璿執行長出席。借重專家學者在臺灣環境教育領域的權威與專業，在本次與馬來西亞環境教育經驗進行交流。各國專家學者亦提議廣立成功個案結合社群媒體擴大 GEEP 號召力，以吸引環境教育領域以外的企業參與，並討論改善目前擬定的國家發展環境教育的工具包清單。另發想如何在目前現有的成果上，發展更多的夥伴關係，以有效運用各界能量，擴大環境教育永續發展效益。

(四) 本次會議討論多項 GEEP 重大議題，成立多個工作小組成果豐碩—
本次會議主要目的議題有 6 點：

- 國家工具包：協助全球規劃及推動環境教育政策。
- 案例研究及電子書：提供夠多案例的深入報導供環境教育人員參考。
- 亞太環境教育論壇：仍需更深入瞭解區域需求，並建議納入多元背景之參與者。
- GEEP 之領導力：培力並善用青年的影響力。
- GEEP 宣言以及下一步行動：以圖像化、簡單文字降低參與門檻，並借助著名人物的影響力號召參與。
- 「大議題」發想：針對 GEEP 的永續經營及未來發展建議 GEEP 應有更多元領域合作。

(五) 觀摩綠旗生態學校 Sri Bestari Private School—Sri Bestari Private School 於西元 2012 年成為生態學校，今年（2019 年）將申請第 2 次綠旗更新，期望取得第 3 面綠旗。推動過程中獲得許多家長及周邊居民以實際行動表達支持，校方也與多個校外團體或企業建立合作關係。在校長及老師的帶領下，全校相當支持環境教育，校園中有許多讓學生接觸環境教育的巧思，校方甚至有以生態學校為主題改編歌曲。現任召集人亦著手規劃師資的培訓與交接，預計以 5 年培訓接班師資，讓生態學校理念可在校內持續執行。

(六) 場勘馬來西亞森林研究所暨馬來西亞自然協會自然教育中心—馬來西亞森林研究所為 1929 年成立之研究機構，在熱帶林相研究上有著全球領導地位。森林研究所與馬來西亞自然協會共同經營自然教育中心，25 年來提供學生及大眾在自然環境中的多元學習機會。除了跟學校合作辦理戶外課程，自然中心也提供環境教育人員實習機會、培訓工作坊，並建立青年志工團隊，讓 15 歲以上的青少年可藉由志工活動接觸自然環境和初步瞭解環境職涯。自然教育中心為公部門與私部門合作的優秀案例。

二、心得建議

(一) 本次活動一直環繞的一項議題是如何讓 GEEP 能夠更廣大蓬勃的發展，其中下列幾點關鍵主題多次被顧問團提出：

1.善用青年力量

GEEP 協助資助的「EE 30 under 30」已成功舉辦 3 屆，相關成果也在此次的活動中有報告。青年的活力與創意不斷激發會議上的熱烈討論，因此青年的號召力也不斷的被各個討論小組提及，不論是 GEEP 的行銷也好、亞洲論壇也好，諮詢委員對於青年都有很高的期許，希望他們能成為 GEEP 亮眼的公關大使。

2.強化社群網絡行銷能力

社群媒體是現代社會不可或缺的平台，但 GEEP 在這些地方都尚未開發。應該要思考能否在 Facebook、Instagram、LinkedIn、Youtube 等平台上發聲，以提升能見度。更重要的是透過社群媒體建立 GEEP 的鮮明形象，刷新各界對於環境教育的眼光與印象。

3.案例與故事

故事是將一件事情有效傳達最深刻的方法，能將 GEEP 的案例用故事包裝推廣，便是件相當重要的工作，因此本次的會議也挖掘出許多案例，希望能讓電子書豐富，並用故事的方式陳述，讓瀏覽者能夠對於 GEEP 的工作與貢獻能有進一步的瞭解。

4.突破同溫層

多年來，GEEP 一向都是內部掌聲不斷，但是往往沒有聽到外界的聲音，導致發展上一直限縮在環境教育圈內。未來若要能擴大發展的漣漪，GEEP 一定要想辦法打破同溫層，接受外面的資訊跟能量。各個參與者都不斷提到，GEEP 應該要將企業與業界的能量導入環境教育領域內，讓與永續 3E (Environment, Economy, Equity)能共同促進 GEEP 發展。

- (二) 本次會議在邀約階段便有多位顧問反映今年國際會議過多，考量預算及時間已無法安排國際行程。雖然會面討論有較好的成效，但 1 年 2 次的國際會議對於出席者是負擔，長途旅行就碳排放而言對自然環境也是負擔。因此建議 1 年舉辦 1 次實體會議，非會議期間則可仰賴科技輔助或以區域為單位組成工作小組進行討論、規劃及推廣。
- (三) 目前 GEEP 之運作經費主要由我國環保署出資，美國環保署則協助負擔各國專家學者之旅費，為確保 GEEP 運作的永續性，建議可考慮多元經費來源，包含與企業、臺商等合作落實企業社會責任。而當 GEEP 網絡發展到一定程度，具有足夠知名度與參與度，經費運用方式可參考我國自然中心之營運模式，來自政府單位的經費改為僅支應基本運作，維持核心運作，而其他周邊費用則由營運單位或透過其他管道自籌。



馬來西亞世界自然基金會教育及行銷主任 Thiagarajan 先生作為地主致歡迎詞



綜合計畫處劉宗勇處長代表我國致詞

圖 4、2019 年全球環境教育夥伴諮詢顧問團隊會議照片



美國環保署資深教育專家 Ginger Potter 女士致歡迎詞



資料司高志璋科長代表我國教育部首次參加 GEEP

圖 4、2019 年全球環境教育夥伴諮詢顧問團隊會議照片 (續)



GEEP 以趣味的互動遊戲讓與會者破冰



劉處長致贈感謝品給馬來西亞自然協會執行長 Shanmugaraj 先生

圖 4、2019 年全球環境教育夥伴諮詢顧問團隊會議照片 (續)



環保署綜合計畫處鄭惠文科長向與會者介紹我國推動減塑政策及菸蒂減量成果



諮詢顧問團成員於會場合影留念

圖 4、2019 年全球環境教育夥伴諮詢顧問團隊會議照片（續）

附件 1 我國環保署於會中分享我國推動簡塑政策及菸蒂減量成果簡報



Coast



Photo credit:
Chien-Ming Lee (李建銘)



鳥友 廖秋豪 提供

CyberLink
by ActionDirector

Video credit: Chiou-Hau Liao (廖秋豪)

3

Consumption

Reduce plastic consumption & littering

1. No single-use plastic straws at:
 - government agencies
 - public and private schools
 - department stores
 - shopping malls
 - fast food chain outlets

※ taking effect starting from July 1st
2. Proper disposal of cigarette butts
 - cleaning campaigns started in 2014
 - new campaign video initiated discussions




4





Advisory Group Meeting

AGENDA

July 24-26, 2019

Hotel: Shangri-la Hotel, Address: 11, Jalan Sultan Ismail, Kuala Lumpur, 50250 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur, Malaysia +60 3-2032 2388

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Meeting Objectives:

1. Provide updates on past year activities and plans for 2019-2020 – the initial findings of the GEEP network survey, Asia Pacific Forum draft goals and agenda, and more
2. Share ideas and feedback on draft outlines for the country toolkit and the e-book, and identify potential country case studies
3. Recommend action steps for:
 - Asia Pacific Forum
 - Building leadership
 - Pledge and possible campaign
 - Others identified in the Meeting
4. Take part in a field excursion

Wednesday, July 24 Evening

6:30 Evening welcome reception (**Kelantan Room, Lower Lobby**)

Thursday, July 25

Location: Shangri-la Hotel; room Johor 3 + 6 (lower lobby)

9:00 Introductions and Welcome

- WWF and Nature Society
- Leadership team remarks
- Overview of goals and agenda
- Getting started activity

9:45 GEEP update: Discuss progress to date including results of the survey, website, Call to Action, the pledge, Fellowship, EE 30 Under 30, Asia Pacific Forum draft goals and agenda, and more

10:25 BREAK

10:40 Q&A on Updates

11:00 Country Toolkit and E-Book Draft Outlines

- Present country toolkit and e-book draft outlines
- Small group discussions – ideas and feedback on the draft outlines

12:00 LUNCH

1:15 Report outs and discussion

2:00 WWF-Malaysia update

2:15 Country Case Studies

- Small group discussions – identifying potential case studies

3:15 BREAK

3:30 Report outs – highlights of potential country case studies

4:30 Updates from the Advisors

5:15 Closing Thoughts and Prep for Day 2

5:30 Adjourn

6:30 Dinner at Beta KL (meet in hotel lobby by 6:10)

Friday, July 26

Location: Room Johor 3 + 6 (lower lobby)

9:00 Getting started

- Opening activity
- Review of Day 1
- Agenda overview

9:30 Small Groups – Recommended Action Steps:

1. Asia Pacific Forum
2. Building leadership
3. Pledge and possible campaign
4. Other (identified during meeting discussions)

10:45 BREAK

11:00 Report outs and discussions

12:00 LUNCH

1:00 Update from Advisors

1:30 Lexington KY conference update; next steps and close

2:00 Meet in lobby for field trip

2:30 Field trip: Sri Bestari School (Eco-Schools Green Flag recipient)

3:10 Welcoming Note from Dr. Steven Baptist, Principal of Sri Bestari Private School.

3:20 Choral Speaking presentation by the Eco Schools Program at Sri Bestari Private School.

3:30 School tour and workshops by students (paper straws, scented candles used cooking oil, tote bag used t-shirt, seed paper, used newspaper workshop)

Demonstration: Eco-board games

4:30 Refreshments

5:00 End of field trip

Making the Case for EE OR Education We Need for the World We Want

--Using Case Studies in Environmental Education

Purpose: Help educators improve their practice by reflecting on forefront EE topics and real-life case studies.

Overview. Environmental education (EE) is helping us to build a more sustainable future by involving people of all ages in learning and stewardship. EE educational approaches and topics continue to evolve along with our understanding of social and ecological problems. To keep EE effective, environmental educators are learning useful ideas from research, from each others' practices, and from their own experiences. This book invites readers – future and current environmental educators – to reflect on and improve their own EE practice by analysing several real-life EE case studies through the lens of various EE topics. This will help readers reflect on their EE program goals and assumptions, revise teaching activities, better understand their audiences, and discuss EE ideas with peers. Learning from real-life scenarios and creating your own case studies will help educators design more effective and creative environmental education programs.

This book can be used in university courses for future environmental educators, and in professional development workshops and online courses for current environmental educators. This volume contains brief reviews of 15 cutting-edge EE topics and accompanied by case studies – which were selected by EE experts. In this book, case studies are first-person professional narratives and program reviews that demonstrate the complexity, messiness, beauty and dedication of diverse educational programs that are creating a more sustainable world. Each case study contains discussion questions for university courses and educator workshops to foster meaningful conversations about EE.

Goals:

- Improve understanding of environmental education by reviewing topics and case studies that demonstrate cutting-edge ideas in this field
- Foster critical thinking among educators by reflecting on and discussing environmental education topics and case studies
- Help educators improve their own practice
- Connect practitioners around the world to a diversity of EE perspectives
- Connect research to real-world practice

Intended audience / market. This book is for university/college professors who want to use case studies to teach courses about environmental education, sustainability, or nature and society. This book will also be useful to facilitate discussions in educator professional development workshops and online courses.

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**Creating a Strong Environmental Education Blueprint for Your
Country
Country Toolkit Outline**

Purpose: To provide a toolkit for strengthening EE at the country level.

Audience: Leaders working in environmental education and sustainability, including government, non-profits, universities, and corporations

Components: More than a dozen strategies for strengthening EE at the country level, building on the Call for Action.

INTRODUCTION:

--why EE

--why a strategic country or regional approach can help strengthen EE

CREATE A VISION

What's the problem we're trying to solve? How could stronger environmental education initiatives in the country help address environmental and social challenges?

--Give tips about how a visioning process could work and link to examples of what others have done at the community level, the state level, and the country and international level.

(This piece could incorporate elements of the root cause activity and knowing your audience activities from the Tools of Engagement, as well as other resources from around the world.)

WHAT DOES A STRONG EE PROGRAM LOOK LIKE?

- **Policy:** Has legislation or policies that advance environmental education (national mandate or legislation; graduation requirements, etc.)
- **Training:** Multiple opportunities that supports professional development for environmental education professionals, including formal and nonformal educators
- **Formal Education:** EE is integrated into formal education—from early childhood to higher education
- **Nonformal EE:** EE is a part of nonformal organizations, including zoos, aquariums, museums, community centers, and more
- **Funding and Sustainability:** Multiple opportunities to secure funding for programs; at the national level, there are secure sources of funding for EE
- **Curriculum and Resources:** Has quality teaching materials that are accessible to educators of all ages in both formal and nonformal settings
- **Reaching all Audiences:** Has a national EE strategy that's inclusive to all sectors including the public (all ages, backgrounds) and all sectors (government, NGO, corporations, etc.)
- **Guidelines:** Has standards or guidelines of excellence that demonstrate what high-quality EE looks like and ideas for how to improve the quality of EE in the country
- **Comprehensive and Interdisciplinary Programming:** EE is integrated within the country at all levels – national, regional, and local
- **Evaluation:** Has strategies for measuring impact and a way to roll up results of environmental education programming and national efforts.
- **Networks:** Has a professional association or EE network for EE practitioners and leaders in the field and opportunities to share, learn, and grow
- **Certification:** Has opportunities for educators to become certified in EE that promote work force development
- **Higher Education:** Has a number of higher education institutions that offer degrees in environmental education and sustainability and incorporates EE into all teacher prep courses

附件五、與會人員簡歷



Advisory Group Meeting

Participant Bios

Summer 2019

(Last name in alphabetical order)



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Judy Braus brings to her role as NAAEE Executive Director a wealth of experience in the environmental education profession, with a focus on conservation education, diversity and inclusion, and using the power of education to help create healthier communities that empower people to help restore and protect the environment. She comes to NAAEE from the National Audubon Society, where she was the Senior Vice President of Education and Centers, overseeing an extensive nationwide network of nature centers and educators. Prior to that, she led the education programs at World Wildlife Fund (WWF), the U.S. Peace Corps, and the National Wildlife Federation (NWF). Judy also has extensive experience with NAAEE, having served in a number of capacities in the past two decades, including past president, conference chair, head of the elementary and secondary commission, and editor of a number of NAAEE monographs. Additionally, Judy is a proven fundraiser, working with foundations, corporations, government, and individual donors to raise more than \$35 million for education and conservation. She is committed to strong partnerships and has negotiated and implemented lasting relationships with organizations, including Toyota Motor North America, REI, National Geographic, the U.S. Fish and Wildlife Service, Disney's Animal Kingdom, Eastman Kodak, and Aardman Animations, among others.



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Drew Burnett is a retired Federal civil servant with 32 years of service in the U.S. Peace Corps, Environmental Protection Agency, Forest Service, and Fish and Wildlife Service. Beginning in July 2019 Drew began working part time as a consultant specializing in meeting facilitation services focused on policy development, decision making, team building, and visioning and strategic planning. Current clients include the North American Association for Environmental Education, Project Learning Tree, and the U.S. Fish and Wildlife Service.



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Professor Chang Tzu-Chau got his PhD. degree in Science Education from Cornell University, and served as the executive secretary of Environmental Protection Division of Ministry of Education of Taiwan to coordinate national environmental education programs in 2008-2012. He is a professor at Graduate Institute of Environmental Education of National Taiwan Normal University and his research focuses on the infusion of Environmental Education into the national curriculum framework, and the implementation and impact of Taiwan Environmental Education Act. He also serves as the director of the Chinese Society of Environmental Education, and works with the government on developing environmental education teaching materials and promoting Education for Sustainable Development. Professor Chang participated in GEEP meetings in 2015, 2016, and 2018.



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Mr. Chichia Chen has assumed duties as Director of General Affairs

Division at the Taipei Economic and Cultural Office in Malaysia since January, 2018. Mr. Chen is a career officer with the Ministry of Foreign Affairs, Taiwan. He has previously served overseas as Deputy Director of Consular Division at the Taipei Economic and Cultural Office in Canberra, Australia, with earlier posting to Houston, Texas, US. In Taipei, Mr. Chen served as Chief of Passport Legal Affairs Section, Bureau of Consular Affairs, Ministry of Foreign Affairs. He has also worked as member of speech writing team for the Foreign Minister. Prior to joining the Foreign Service, Mr. Chen worked as assistant to Legislator Wei Yung, Legislative Yuan (Parliament), Taiwan. Mr. Chen holds a Master of Arts in International Affairs from the George Washington University, US.



HUI-WEN CHENG

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Ms. Cheng has over 16 years' experience working for Taiwan EPA and the Taoyuan Environmental Protection Bureau. She got her Master of Public Health (MPH) degree in National Taiwan University in 2004, and began her job in Taiwan EPA in 2008. She is currently serving as the Chief for environmental education section in Department of Comprehensive Planning (DCP) from April 2019. She had been in position as an administrative assistant, inspector, officer, technical specialist before she got promoted to be a Chief in DCP. The experiences in different positions inspired her to be an open-minded and faithful person in environmental protection. She will continue devoting her time to guide all activities, strategies, policies, innovations, and planning for environmental education.



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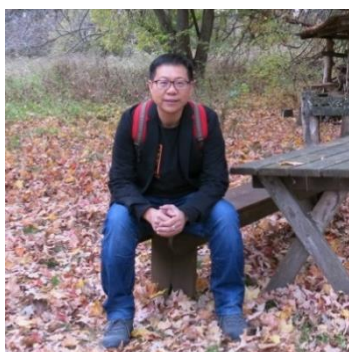
Nina Hamilton supports coordination of the GEEP and NAAEE's international leadership program. Nina came to NAAEE with a background focused on community-based conservation and social

inclusion, from working with mangrove-dependent communities in Madagascar to coordinating a global advisory group to promote women's land rights. After a childhood spent living in Asia and Latin America, Nina is particularly passionate about working across cultures to combine her interests in the environment, sustainable development, and social equity. Nina has a Master's in Environmental Management from Duke University, and through her Master's project worked closely with a community-based wildlife management and environmental education project in Gabon, where she conducted community mapping in 10 rural communities to better understand their priorities and concerns related to their natural resources.



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Justin Harris is a Senior Program Manager with the U.S. Environmental Protection Agency's Office of Regional & Bilateral Affairs. He is the U.S. coordinator for the International Environmental Partnership. He has direct responsibility for collaborative programs addressing toxics, waste, water, climate change, enforcement/governance, and environmental education. Mr. Harris is the agency's lead for the Cities Clean Air Partnership and serves as a liaison to the American Institute in Taiwan. Prior to joining the EPA in 2009, Mr. Harris worked in the private sector in Asia for ten years. He is fluent in Mandarin Chinese and graduated with an M.S. in Foreign Service from Georgetown University in 2002.



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Tim received his Master and Ph.D. degrees from School of Natural Resources, Ohio State University of USA. He had been teaching at the University for more than 15 years. Since February, 2019 he formally retired from the University, and switched his career into EE corporation for leading young generations who specialize in EE/ESD fields to create “Green-Collar employments”. In addition, Tim works for CSEE_Chinese Society for Environmental Education as Board Committee, as well as serves as the leading role of national EE projects for years, including EE in the schooling system developed by Ministry of Education, nonformal EE in Nature Centers promoted by Taiwan Forestry Bureau, and International cooperation in academic and practical development with UK, Japan, Korea, and China. In addition, Tim serves as the operational consultant for National Marine Museum, Taijing National Park, Water Resources Bureau, Taiwan Sugar Corporation and so on. His research interests focus on program design, professional training, and evaluations in relation to formal and nonformal environmental education settings, as well as promotion of EE Act. Tim has translated and written many popular science books, and kept publishing academic articles. When Tim served as the President of the Chinese Society for Environmental Education (CSEE) in 2015, he has joined in the GEEP advisory committee developed by The North American Association for Environmental Education (NAAEE), US-EPA, and EPA Taiwan.



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Steve Joyce is an organizational development specialist with over 30 years of experience designing and implementing activities for private and public sector organizations in the United States and throughout the world. He has extensive experience assisting U.S. government agencies and NGOs, including USAID, U.S. Forest Service, National Audubon, ACIDI-VOCA, the IMF, and the U.S. Department of State. He has assisted numerous national and international programs with strategic thinking and implementation planning, communication approaches and participatory stakeholder processes, capacity building (government institutions, NGOs and private sector associations), and has been very successful in helping disparate stakeholder groups reach shared vision of what needs to be done, negotiating organization roles and responsibilities, coaching network/stakeholder and national leaders, facilitating problem solving and conflict resolution, and helping stakeholder coalitions grow and

prosper. Over the last few years, he has provided assistance to programs in Indonesia, Angola, Lesotho, Uganda, Kenya, Jordan, Lebanon, Morocco, Iraq, Albania, Qatar, and Egypt (where he lived for 6 years). In addition to Egypt, he has also resided in Nigeria and Benin.



CHENG-KUAN (KEVIN) KAN

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Kevin Kan earned both his M.S. in Sustainable Systems and M.U.P. in Environmental Planning from University of Michigan.

He is currently a project supervisor at Environmental Science Technology Consultants Corporation (ESTC). ESTC is responsible of assisting the Environmental Protection Administration with the United States-Taiwan Eco-Campus Partnership Program. In addition to environmental education, Kevin is also interested in issues related to climate change and resilient cities. His specialty at ESTC is organizational environmental management system and carbon management. Kevin is now also working on an Eco-port development project, helping commercial ports in Taiwan to become more resilient and sustainable. He is fluent in Mandarin Chinese, English, and Japanese, so please feel free to ask him for help if you need any assistance.



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Chih-Chang serves as section chief of Division of Environment and Disaster Protection, Ministry of Education, Taiwan, in charge of environmental education, disaster prevention education, education on climate change and green energy & energy conservation, sustainable & resilient campus, and college environmental health & safety since 2017. Dedicated to education, he has worked for Ministry of Education, Taiwan, for 9 years, and for Department of Education, Taipei City Government, for more than 6 years. He studied in Department of Industrial Education, National Taiwan Normal University, for his master's degree with all the required courses finished. He earned his Bachelor's Degree in Atmospheric Sciences from

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Mphemelang Ketlhoilwe (M.J.) is an Associate Professor of Environmental Education at the University of Botswana. He began working for the University of Botswana in 1999, after 15 years of service in the Curriculum Development Centre as an Education Officer (Environmental Education). Currently, he is President of the Environmental Education Association of Southern Africa (EEASA) and serves on the Advisory Group of the Global Environmental Education Partnership (GEEP).



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Chankook Kim is an Associate Professor in the Department of Environmental Education at Korea National University of Education. He is also a fellow of Asian Institute for Energy, Environment and Sustainability (AIEES) in Seoul. He received his Ph.D. in human dimensions of the environment and natural resources from Ohio State University. His research areas sit at the intersection of environmental studies and environmental education, including climate change education, education for sustainability and environmental communication on environmental issues. In the area of environmental education, his research interests cover how citizens understand scientific information on environmental issues and how educators deal with the issues in their teaching and learning contexts.



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Johleen Koh ventured from the private sector and

environmental consultancy to an NGO in Education for Sustainable Development 8 years ago. She is a marine biologist graduated from Universiti Malaysia Sabah with the passion to create awareness and bring about change for a better environment. She aims to empower youth by arming them with knowledge and durable skills as well as inspiring them to lead and take action for a better future. She also believes that it takes one person's greed and foolishness to bring down Mother Nature but it also takes one human to bring equilibrium on Earth.



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Alex Kudryavtsev (pen name: Alex Russ) is an environmental education researcher, book editor, and online course instructor in the Cornell University Civic Ecology Lab. He has worked in environmental education since 1996 in Russia and then in the U.S. He completed his M.S. (2006) and Ph.D. (2013) degrees in environmental education at Cornell University. His research focused on urban environmental education and sense of place. Alex is the first editor of the "Urban Environmental Education Review" international textbook (Russ and Krasny, 2017) published by Cornell University Press (<http://tinyurl.com/UEERbook>). Alex has authored articles in top environmental education journals, traveled seven continents to observe environmental education programs, and is interested in advancing environmental education through research and educator training to foster environmental sustainability and human well-being. <http://ak383.org>



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Chien-Ju serves as a senior officer in environmental education at the Department of Comprehensive Planning, Taiwan EPA. Although she just joined in Taiwan EPA for less than a year, she has had around four years of the experience on serving as an associate technical specialist of the Environment Protection Bureau in New Taipei City, Taiwan. She got her master

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Mr. Liu got his Master's degree at Imperial College London, majoring in Environmental Engineering. He has served in the Taiwan EPA for 25 years. He has been involved in the program of International Environmental Partnership and Global Environmental Education Partnership since 2014, when he served as the Executive Secretary of Office of Sustainable Development with US EPA. He is now the Director General in the Department of Comprehensive Planning in Taiwan EPA, in charge of EE policy and environmental impact assessment.



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Prior to joining Environmental Science Technology Consultants Corporation in 2016, Rhea participated in research on Taiwanese temporary wetland ecology and volunteered with environmental education, including infusing environmental concepts into elementary English lessons, assisting with the resource management simulation game Fishbanks, and designing and promoting ecology board games. Now she mainly works on the US-Taiwan Eco-Campus partnership program to bring more diverse forms of environmental education into the formal education system.



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Gus Medina is a former Program Officer for the World Wildlife Fund (WWF-US). In that capacity he worked with

government agencies and nongovernmental organizations throughout Latin America and the Caribbean to design conservation initiatives, environmental education programs, and public awareness campaigns, conduct environmental education professional development workshops, and develop educational resources. In collaboration with the U.S. Fish and Wildlife Service, the Smithsonian, the U.S. Environmental Protection Agency, the North American Association for Environmental Education, and Environmental Education and Conservation Global, he has presented sessions and facilitated workshops on environmental education and social marketing in China, India, Taiwan, and Thailand.



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Thiaga Nadeson had been with the Ministry of Education of Malaysia for 5 years, and investment holding affairs for another 5 years, before joining WWF-Malaysia in 2001.

He has been involved with sustainability work ever since his work infusing environmental education in formal education system through schools and universities, supervising community education for rural and indigenous community within WWF-Malaysia's priority conservation areas, and introducing the sustainable cities program or One Planet City Challenge Programme with WWF-Malaysia. Thiaga also introduced *Sekolah Hijau* (Green Schools) which later was fundamental in the creation of *Sekolah Lestari* (Sustainable Schools) and *SERASI* (Environmental Friendly Schools) in Sabah. Using his corporate affairs knowledge and skills, he is now managing a team that deals with transforming companies' uptake of sustainably produced soft commodities such as Palm Oil, Timber and Rubber. He also leads the sustainable finance programme which deals with banks, investors and regulators such as Stock Exchange of Malaysia (Bursa Malaysia), Securities Commission and other financial institutions. He was a Board Member of the Foundation for Environmental Education, was part of the WWF's sustainable development for conservation Asia-Pacific team for rural and indigenous community work, alternate member for Green Growth Asia's Advisory Committee and Sustainable Solution Network Malaysia Chapter. Eco-Schools, Eco-Institutes and Eco-Campus are among the three programmes introduced under his leadership in Malaysia and he has deep interest to integrate them with the cities' sustainability programmes in Malaysia.



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Ginger Potter is the Senior Environmental Education Specialist in the Office of Public Engagement and Environmental Education (OPEEE) for the U.S. Environmental Protection Agency. Ms. Potter is responsible for environmental education program design, implementation, and management as well as research, evaluation and program assessment and strategic planning in the Office of Environmental Education. She serves as the Project Officer for the National Teacher Training and Professional Development Program (currently ee360) and is the Co-Chair of the Global Environmental Education Partnership (GEEP). Before coming to EPA, Ms. Potter was a research chemist for the U.S. Geological Survey. Ms. Potter has degrees in Chemistry, Business Administration, and Organizational Development/Behavioral Psychology. She has published several articles on environmental education and speaks frequently at national and international conferences on education and sustainable development education issues.



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Mahesh has over 20 years of experience with the United Nations Environment Programme (UNEP) on EE. He launched the Global Universities Partnership on Environment and Sustainability (GUPES) in the lead up to the Rio+20 Summit, which currently comprises over 800 universities from Africa, Asia Pacific, Latin America and Caribbean, Europe, North America, and West Asia. Mahesh also launched UNEP's first Massive Open Online Course (MOOC) on ecosystems-based disaster risk reduction, with a rapidly increasing portfolio. He is working on a knowledge management platform on holistic waste management, and a graduate curriculum through UNEP's International Environmental Technology Centre in Osaka.



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Gayatri Raghwa lived in Abu Dhabi, United Arab Emirates for 27 years and recently moved to her home country, India, to be with her family. She has worked to raise the profile of EE since its inception at Abu Dhabi. She has worked as a volunteer, with an NGO, and with the government to promote EE. At the Environment Agency-Abu Dhabi, where she worked as a senior specialist, she strategized for EE at the government level, developing, designing, and implementing programs for schools, colleges, and other audiences. She also developed MOUs with EE organizations, such as NAAEE, Centre for Environmental Education, AAEE and in other parts of the world. She has developed resource materials, such as books and manuals for varied audiences, regularly conducting training of trainer modules for school and college educators. She also contributes as a member of the Zayed Future Energy Prize, Eye on Earth, and United Nations Commission on Sustainable Development Education. She has developed and run successful programs such as the Enviro-Spellathon, Sustainable Schools Initiative, and the Sustainable Campus Initiative for the Environment Agency-Abu Dhabi. She continues her work on sustainability with Wildecologue, an organization which strives to promote sustainable life styles as Executive Director and also a free-lance consultant developing resource materials for Abu Dhabi organizations and several other organizations in India.



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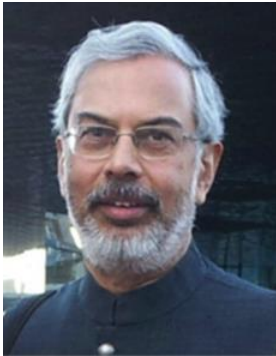
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At the initial stage of Shida's career with WWF-Malaysia, she was instrumental in leading a five-year environmental education (EE) policy project which saw the development and advocacy process on the proposal to include EE policy statement in the National Education Policy to Ministry of Education, Malaysia. Additionally, she managed and led the Eco-Institutes Project before moving to her current position. She graduated from Universiti Kebangsaan Malaysia with a degree in Education majoring in Teaching

English as A Second Language (TESL). Before her career in conservation, she had a six year teaching stint in Malaysia public and private education institutes. She is trained in Environmental Education, project and programme development and management, youth and urban development and strategic planning.



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Kartikeya V. Sarabhai is the founder and director of India's Centre for Environment Education (CEE), headquartered in Ahmedabad. He is a member of the United Nations Decade of Education for Sustainable Development Reference Group of UNESCO. He has long been associated with the International Union for Conservation of Nature and Natural Resources (IUCN), and was chair of South and South East Asia IUCN Commission on Education and Communication. He is currently vice-chair of the Indian National Commission of IUCN. He is also a member of the Earth Charter International Council. He was a member of the Indian delegation to the United Nations Conference on Environment and Development (UNCED) in Rio in 1992 and the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, and Kartikeya co-authored India's report for UNCED. He has been closely associated with communication initiatives of United Nations Environment Programme (UNEP), especially those connected with ozone. He has served on several committees of India's Ministry of Environment and Forest and Ministry of Human Resource and Development.



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Roath Sith has worked for the General Directorate of Environmental Knowledge and Information (formerly Department of Environmental Education and Communication) in the Ministry of Environment since 1994. During this time, Roath has held various positions as Library Manager, Vice Chief Office, Chief Office of Environmental Education and Training, Deputy Director of Environmental Education and Communication (DEEC),

DEEC Director (2012-2015), and Deputy Director General of Environmental Knowledge and Information (2015-present). Roath has experience in formal, non-formal, and informal environmental education practices, including mainstreaming environmental education into curriculum, delivering environmental training courses for in-service teachers, developing teacher guides for primary school teachers, producing both online and offline environmental learning materials, and conducting youth environmental debates for broadcasting via national television. Roath also has experience working on the ASEAN Environmental Education Action Plan and ASEAN Eco-School initiatives.



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I.S. Shanmugaraj (Shan) is the Executive Director of Malaysian Nature Society. He has served the organisation for over 20 years and has championed its Environmental Education Division from the inception of Kuala Selangor Nature Park, Selangor in 1987 until the launching of the latest Vale Eco Centre in 2015. His extensive expertise includes botany and entomology, with a special focus in forest species and forest planting in mangroves. He has also been instrumental in the development and establishment of the Environmental Education Centre, and developing environmental community-based programmes. Mr. Shanmugaraj has led the Kelab Pencinta Alam since 1991, which has a membership of 20,000 from 400 schools.



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Melissa Hopkins Taggart joined NAAEE to work on the Global Environmental Education Partnership, a partnership between the U.S. EPA, EPA Taiwan, NAAEE, and several countries throughout the world. With more than 15 years of experience working in environmental education, Melissa most recently directed the National Audubon Society's Toyota TogetherGreen program, a \$25 million partnership between Audubon and Toyota. Prior to joining Audubon in

2007, Melissa worked at Discovery Creek Children’s Museum, where she developed science education curriculum and initiated the organization’s first comprehensive evaluation of its programs, and American Rivers, where she was responsible for managing the organization’s foundation portfolio. Melissa has a B.A. from Franklin and Marshall College and an M.S. from the University of Michigan’s School of Natural Resources and Environment, with a focus in environmental education and psychology.



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Kumi Tashiro is a Deputy Director of the Office of Environmental Education at the Ministry of the Environment Japan (MoEJ). Kumi is in charge of Environmental Education, especially collaborating with Ministry of Education, schools/universities, local communities, and NPOs/NGOs. She is also responsible for international collaboration on EE/ESD/SDGs, and currently working on young leader’s training, as well as community engagements. She is involved with the Youth Forum under the Tripartite Environment Ministers Meeting (TEMM) among Japan, China and S. Korea, Tripartite Environmental Education Network (TEEN), ASEAN+3 Leadership program with ASEAN Secretariat, higher education on sustainability in Asia-Pacific region (ProSPER.Net; Promotion of Sustainability in Postgraduate Education and Research) and regional centers (RCE; Regional Centres of Expertise on ESD) in the world with United Nations University. Kumi is specialized in participatory community design, child & youth-friendly urban planning, and design education. She has worked on research projects and given lectures at several universities in Japan, the U.S., and Hong Kong S.A.R., before joining MoEJ.



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JO LEEN YAP

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Jo Leen is currently a wildlife researcher, nature educator and Ph.D. student in zoology at the School of Biological Sciences, Universiti Sains Malaysia (USM), where her research project is “Ecology, behaviour, and road ecology study of dusky langur (*Trachypithecus obscurus*) for the development of a sustainable langur conservation plan in Penang.” Jo Leen is also a member of the EE 30 Under 30 Class of 2018. She expanded her research on dusky langurs by founding the Langur Project Penang (LPP), a community outreach project under the umbrella of USM and the Malaysian Primatological Society (MPS). LPP serves as a platform for research and education for local students and the community, through collaboration with governmental bodies, educational institutions, and non-governmental organizations (NGOs) in Malaysia. Jo Leen previously worked as an educational officer at the Dark Cave Conservation Site in Kuala Lumpur and an environment educator in the Penang Tropical Spice Garden years.

匯集全球環境教育色彩 繪製亞太環教新藍圖

提供單位：行政院環境保護署綜計處

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我國環保署及美國環保署共同合作之全球環境教育夥伴計畫，邀請來自10國共約31名政府官員及非政府組織等環境教育專家學者，於108年7月25日及26日在馬來西亞吉隆坡市召開「2019年全球環境教育夥伴諮詢顧問團會議」，討論如何連結亞太環境教育資源，擴展亞太地區環境教育實力，並為2020亞太環境教育論壇進行暖身。

此次會議由我國環保署及美國環保署合辦，參與之諮詢顧問分別來自俄羅斯、波札那、日本、韓國、柬埔寨、馬來西亞、印度、加拿大、美國及我國等10個國家，我國則由環保署綜計處劉宗勇處長率團出席會議，其中包含2位我國環境教育領域的專家共同參與。劉處長於開幕致詞時表示，臺灣藉由和美國在環境保護方面的長期合作，從初期的技術引進，到近年的互相交流學習，展現國際合作對國家發展的重要性。而環境教育如此跨領域，且跨越國界與地域的議題，更應藉由多方交流，共同提升影響力。因此，全球環境教育夥伴的角色相當重要。而本次會議除了借助參與會議的各國專家代表的專業知識外，更期盼能分享臺灣的環境教育經驗，共同強化並擴大環境教育的影響領域。

全球環境教育夥伴計畫預計將於2020年辦理首場區域環境教育論壇，以亞太地區做為強化區域網絡的先驅。企盼透過區域交流學習他國長處、分享我國經驗，提升各國環境教育品質，以環境教育培養具備永續理念的世界公民。

回首過去25年，環保署與美國環保署在外交部與美國在台協會的協助下，已建立了深厚的夥伴關係，本次會議將能在此基礎上更進一步推動我國環境教育和全球的合作關係，並在環境教育合作上落實推動新南向政策，奠定臺灣在全球環境教育永續發展的地位。

附加檔案：

- [2019年全球環境教育夥伴\(GEEP\)諮詢顧問團會議在馬來西亞.jpg](#)

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